

14. (Twice Amended) Antistatic workwear, according to Claim 1, further comprising at least one pant cuff portion and a corresponding boot in which one or more of the strips or tapes provide an electrically conducting path extending from the at least one pant cuff portion to the corresponding boot, respectively.

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REMARKS

Claims 1 through 15 remain pending in this Application. Claims 1, 2 and 14 have each been amended twice. Minor changes have been made in the Specification to improve clarification and language. No new matter has been entered.

By the above amendment, Applicants have amended the claims to more clearly emphasize the novelty of the invention and to more particularly define the invention, as well as to clarify the claim language in order to place the claims in better form to overcome the technical rejections.

Paragraph 2 of the Office Action advises that Claims 1-3 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter and that Claims 3-13 and 15 are further rejected for their dependency on Claim 1.

The Examiner considers the wording of Claim 1 to be indefinite with regard to the strip or tape having "alternate portion exposed at opposite sides of the strip or tape". Applicants submit that this wording was intended to define the construction shown and described in the Specification with reference to Figure 13, in which the second electrically conductive yarn 131

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protrudes through the surface of the strip 130 alternately on one side and then the other along the length of the tape or strip. Applicants have amended the wording to now read --portions of the second electrically conductive yarns are exposed along the length of the strip or tape alternately on a first side and a second side of the strip or tape--. Applicants believe the new wording
5 corrects the indefiniteness issue raised by the Examiner.

The Examiner considers unclear the language regarding the second electrically conductive yarn being "pressed" into conducting engagement with at least some of the conductive yarns in both adjacent components. Applicants intended the language used to cover several embodiments including a particular arrangement in which the tape or strip is stitched to the components. The
10 manner in which the second yarn is maintained in contact with at least some of the conductive yarns include those disclosed in page 3, lines 22 to 23 of the Specification. For example, a stitching operation would inherently place the strip or tape under a compressive force. Likewise, any other techniques mentioned in page 3 of the Specification would similarly apply pressure to the yarns and urge them together. The Examiner's interpretation appears to restrict the claim to
15 a form of construction which only covers the embodiment wherein the strip or tape has means by which it may be attached to the components by itself, such as by utilizing an adhesive backing. Applicants have amended Claim 1 by replacing the phrase "and are pressed into conducting engagement" with the following new phrase --and the component and conductive member are attached to one another such that the second electrically conductive yarn are urged into
20 electrically conducting engagement--. Applicants believe the new phrase incorporated into Claim 1 (Twice Amended) fully resolves the indefiniteness issue raised by the Examiner.

The Examiner rejects Claim 2 for indefiniteness because the Examiner is unclear as to how the yarns are "sharply bent" by the structure of the strip or tape and how this arrangement would produce a "corona discharge". Moreover, the Examiner raises the question of whether the electrically conductive yarns of the components or the electrically conductive yarns of the strip or tape are "sharply bent". Applicants had intended the claim to specify that the second electrically conductive yarns, i.e., those in the strip or tape, are "sharply bent". Support for this statement can be found in the Specification relating to the description of Figure 13. The claim specified that the first and second yarns were sharply bent. Applicants have amended Claim 2 to rectify and clarify what Applicants had intended to claim.

As to the question on how the yarns are "sharply bent", and how this arrangement would produce a "corona discharge", any electrical conductor that terminates into a point will generate a higher electrical field strength leading to the potential for a corona discharge. This is why lightning rods are generally pointed. In the present invention, the sharply bent portions create equivalents of "points" which can facilitate corona discharge. A more complete description can be found in page 13 at lines 11 to 18 of the Specification. Applicants believe that Claim 2 (Amended) is clear regarding the "sharply bent" yarns and the promotion of the corona discharge. However, as required by the Examiner, Applicants have amended the claim in order to better clarify the claim language. Applicants believe that the corresponding amendment has resolved the indefiniteness issue raised by the Examiner.

The Examiner rejects Claim 3 on the basis that the phrase "more widely" is a relative term which renders the claims indefinite. Moreover, the Examiner advises that the phrase "more

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widely” is not defined by the claim and that the Specification does not provide a standard for ascertaining the requisite degree in which one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Applicants had intended to claim that the spacing between the first yarns to be greater than the spacing between the second yarns. There is no specific requirement for any particular spacing. Support can be found in page 8 of the Specification corresponding specifically to the description of Figure 4. Moreover, the description in page 8 of the Specification does provide a standard for ascertaining the requisite degree since it is stated therein that the spacing between the first yarns 21 in the component is 5 mm whereas the space between the second yarns 22 in the strip or tape is only 2 mm. Applicants therefore believe that the claim is clear as it stands and that no further detail is necessary in order for one skilled in the art to ascertain the scope of the claim.

Finally, the Examiner rejects Claim 14 on the grounds that the limitation “pant cuffs to associated boots, respectively” recited in line 3 of the claim lacks sufficient antecedent basis. Applicants have amended Claim 14 to resolve the identified defect in the claim.

Paragraph 7 of the Office Action advises that Claims 1 to 3 and 6 to 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Banks, U.S. Patent No. 5,991,922. The Examiner indicates that the Banks reference discloses a static electricity dissipation garment that is connected to a voltmeter (See Abstract and Figure 1). The Examiner further states that Bank teaches each and every element of Applicants’ present invention as claimed. Applicants respectfully traverse this rejection, and request reconsideration in view of the remarks made herein. There are significant features claimed in Claim 1 (Twice Amended) which are not taught

in Banks. Claim 1 (Twice Amended) recites an electrically conductive member having a combination of three features concerning the second electrically conductive yarns. The second electrically conductive yarns are required: 1) to have a larger diameter than the first electrically conductive yarns of the components; 2) to have portions exposed alternately on a first and a second side; and 3) to be urged into electrically conducting engagement with at least some of the first yarns.

The Banks reference fails to teach or disclose the features of the larger diameter and the alternately exposed sides of the second electrically conductive yarns. In particular, although Banks discloses the spacing between the first yarns (see col. 4, lines 2-4) as being one-quarter of an inch and the second yarns (see col. 4, line 12) in the ribbon as being "closely spaced", there is no teaching or disclosure of the relative diameters of the first and second yarns. In fact, it could be reasonably inferred for the description in column 4 of the Banks reference that the fibers (i.e., the second yarns) in the ribbon are of a smaller diameter than the diameter of the fibers (i.e., the first yarns) in the fabric of the pantsuit components. This is, of course, quite opposite to the relative dimensions as claimed in Claim 1 (Twice Amended). Moreover, Banks fails to teach or disclose the exposure of the second yarns alternately on a first side and a second side along the length of the strip. The only disclosure remotely relevant appears in the description in column 6, line 5 to 19 of the Banks reference where there is a discussion on the best technique to use, depending on whether the electrically conductive fibers 42 (i.e., the first yarns) are mostly exposed on one side of the fabric or embedded within the fabric of the components making up the antistatic garment. Clearly, this disclosure has no bearing on the relative diameters of the first and second yarns.

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As far as determined from the teaching in Banks, there is no anticipation of the first two features identified above. We therefore respectfully submit that Claim 1 (Twice Amended) is novel and unobvious over the cited reference. The amendment made to Claim 1 is intended to improve the clarity of the claim language and to enhance the distinction that already exists
5 between Banks and Applicants' present invention as claimed. In addition, although Banks discloses a particular arrangement of ribbons over the garment and a particular relationship between the garment and boots forming part of the overall apparel, as brought to attention by the Examiner, these features are not specified in Claim 1 (Twice Amended), and thus are not germane to the issue of the novelty of Claim 1 (Twice Amended). For the above reasons, Claim 1 (Twice
10 Amended) is patentable over the cited reference, and in condition for allowance. Claims 2, 3, and 6 to 15 are also patentable at least for the same reasons since each ultimately depend from Claim 1 (Twice Amended).

Paragraph 9 of the Office Action advises that Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banks, U.S. Patent No. 5,991, 922. The Examiner states that
15 although Banks fails to disclose the diameter of the electrically conductive polyester yarns, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the diameter of the yarns used in the garment and electrically conductive ribbon in order to enhance the electrical conductive dissipation properties. Applicants respectfully traverse this rejection, and request reconsideration in view of the remarks made herein. The comments
20 made above as related to Claim 1 (Twice Amended) are applicable herein. As noted and identified above, the Banks reference fails to teach several critical features claimed by Applicants in Claim 1 (Twice Amended). In particular, there is no teaching or disclosure of using relative diameters

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for the first and second yarns as claimed by Applicant. Banks makes no mention of using differing diametric sizes of the first and second yarns in the manner claimed by Applicants. Thus, Banks teaches away from Applicant's claimed invention. Moreover, the prior art lacks any suggestion or motivation for modifying the reference in a manner required to meet the claims. In fact, one
5 of ordinary skill in the art relying on Banks would not have been able to select the ranges of the relative diameters of the first and second electrically conductive yarns claimed in Claims 4 and 5, respectively, since there is no reason or motivation to have the differing diametric sizes claimed by Applicants. Accordingly, for these reasons, Claims 4 and 5 are patentable and unobvious over the cited reference. Moreover, Claims 4 and 5 are patentable for at least the same reasons as
10 Claim 1 (Twice Amended), from which they each ultimately depend.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Please amend the specification as indicated below in marked-up version:

Paragraph 1 of Page 3:

5 According to the present invention an article of workwear, comprising a plurality of
components incorporating first electrically conductive yarns and an electrically conductive
member bridging the junction between adjacent components, has the electrical conductivity
between adjacent components enhanced by forming the electrically conductive member from a
strip or tape incorporating a plurality of second electrically conductive yarns, which are of larger
10 diameter than the first electrically conductive yarns in the components. [components, have
alternate portions exposed at opposite faces of the strip or tape] Portions of the second
electrically conductive yarns are exposed along the length of the strip or tape alternately on a first
side and a second side of the strip or tape, [and are pressed into conducting engagement] and the
component and conductive member are attached to one another such that the second electrically
15 conductive yarns are urged into electrically conducting engagement with at least some of the first
electrically conductive yarns in both adjacent components. Throughout the specification and the
claims the word "yarn" is used generically to include any yarn, fibre, filament or equivalent

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component of a workwear fabric, strip or tape. At least some of the electrically conductive yarns may be formed from a carbon-coated polyamide or a conductive polyester.

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In the Claims:

Please amend the claims as indicated below in marked-up version:

1. (Twice Amended) Antistatic workwear comprising a plurality of components incorporating first electrically conductive yarns, and an electrically conductive member bridging the junction between adjacent components, wherein the electrical conductivity between adjacent components is enhanced by forming the electrically conductive member from a strip or tape incorporating a plurality of second electrically conductive yarns which are of larger diameter than said first electrically conductive yarns, [have alternate portions exposed at opposite sides of the strip or tape] portions of the second electrically conductive yarns are exposed along the length of the strip or tape alternately on a first side and a second side of the strip or tape, [and are pressed into electrically conducting engagement] and the component and conductive member are attached to one another such that the second electrically conductive yarns are urged into electrically conducting engagement with at least some of the first electrically conductive yarns in both adjacent components.

2. (Twice Amended) Antistatic workwear, according to Claim 1, in which the [first and] second electrically conductive yarns are sharply bent by the structure of the strip or tape to promote a corona discharge.

14. (Twice Amended) Antistatic workwear, according to Claim 1, further comprising at least one pant cuff portion and a corresponding boot in which one or more of the strips or tapes

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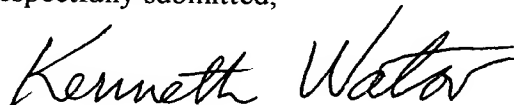
provide an electrically conducting path extending from the at least one pant [cuffs] cuff portion to [associated] the corresponding [boots] boot, respectively.

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For all of the above reasons, Applicants submit that the specification and claims are in proper form, and that this Application is in condition for allowance. Accordingly, it is requested that the claims be allowed, and the case passed to issue. **However, if the Examiner believes that any issues remain, Applicants respectfully request that the Examiner telephone**

5 **Applicant's attorney to resolve such issues.**

Respectfully submitted,



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